CLAIMS

What is claimed is:

1. A method of controlling a vehicle engine, comprising the steps of:

a) sensing a turning state of a vehicle;

b) determining an optimal engine speed for the vehicle in the turning state;

c) determining an actual engine speed for the vehicle in the turning state;

d) comparing the actual engine speed with the optimal engine speed;

e) determining whether a difference exists between the optimal engine speed and the actual engine speed;

f) comparing the difference between the optimal engine speed and the actual engine speed with an engine load; and

g) determining an amount to reduce the difference between the optimal engine speed and the actual engine speed based on step f).

2. The method of Claim 1 including the step of

h) reducing the difference between the optimal engine speed and the actual engine speed by the amount determined by step g).

3. The method of controlling the vehicle engine of Claim 2 wherein steps c) to h) are repeated until the difference reaches a predetermined level of difference.

4. The method of Claim 3 wherein the actual engine speed is prevented from achieving the optimal engine speed by a predetermined offset amount.

5. The method of Claim 2 wherein step h) is performed only if the amount determined by step g) does not exceed a predetermined amount.

6. The method of Claim 2 wherein step h) comprises altering the actual engine speed to reduce the difference between the actual engine speed and the optimal engine speed.

7. The method of Claim 6 wherein altering the actual engine speed comprises altering a torque output of an engine of the vehicle.

8. The method of Claim 7 wherein the torque output is altered based upon the amount of step g).

9. The method of Claim 8 the torque output is only altered if a predetermined condition is met.

10. The method of Claim 9 wherein the predetermined condition relates to a safety concern in an operation of the vehicle.

11. A method of controlling a vehicle engine, comprising the steps of:

a) sensing a turning state of a vehicle;

b) determining an optimal engine speed for the vehicle in the turning state;

c) determining an actual engine speed for the vehicle in the turning state;

d) comparing the actual engine speed with the optimal engine speed;

e) determining whether a difference exists between the optimal engine speed and the actual engine speed;

f) comparing the difference between the optimal engine speed and the actual engine speed with an engine load;

g) determining an amount to reduce the difference between the optimal engine speed and the actual engine speed based on step f);

h) reducing the difference between the optimal engine speed and the actual engine speed by the amount determined by step g) wherein step h) comprises altering the actual engine speed to reduce the difference between the actual engine speed and the optimal engine speed by altering a torque output of an engine of the vehicle.

12. The method of controlling the vehicle engine of Claim 11 wherein steps c) to h) are repeated until the difference reaches a predetermined level of difference.

13. The method of Claim 12 wherein the actual engine speed is prevented from achieving the optimal engine speed by a predetermined offset amount.

14. The method of Claim 11 wherein step h) is performed only if the amount determined by step g) does not exceed a predetermined amount.

15. The method of Claim 11 wherein the torque output is altered based upon the amount of step g).

16. The method of Claim 15 the torque output is only altered if a predetermined condition is met.

17. The method of Claim 16 wherein the predetermined condition relates to a safety concern in an operation of the vehicle.

18. An engine control system comprising:

an engine control unit for a vehicle;

a sensor for determining a turning state of the vehicle, said sensor in communication with said engine control unit;

an engine speed sensor in communication with said engine control unit;

an engine load sensor in communication with said engine control unit;

an engine speed logic guiding said engine control unit and in communication with said engine speed sensor, said engine speed logic for determining an optimal engine speed for the vehicle in the turning state and for determining an actual engine speed for the vehicle in the turning state from said engine speed sensor, said engine speed logic further for comparing the actual engine speed with the optimal engine speed and for determining whether a difference exists between the optimal engine speed and the actual engine speed;

an engine load logic in communication with said engine load sensor, said engine load logic for comparing the difference between the optimal engine speed and the actual engine speed with an engine load and for determining an amount to reduce the difference based on the engine load.

19. The engine control system of Claim 18 wherein said engine speed logic is performed by a proportional integral differential controller.

20. The engine control system of Claim 18 wherein said engine control unit is in communication with a transmission control unit.